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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/916,268	07/30/2001	Vishal Malik	10016243-1	8679

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EXAMINER	
BRUCKART, BENJAMIN R	
ART UNIT	**PAPER NUMBER**
2155	

DATE MAILED: 07/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/916,268	MALIK, VISHAL	
	Examiner	Art Unit	
	Benjamin R. Bruckart	2155	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 March 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Detailed Action

Status of Claims:

Claims 1-24 are pending in this Office Action.

Response to Arguments

Applicant's arguments filed in the amendment filed 3/22/05, have been fully considered but they are not persuasive. The reasons are set forth below.

Applicant's invention as claimed:

Claim Objections

Claim 16 is objected to because of the following informalities: "wherein the at least one sub-broker includes a..." The sub-broker here should be plural as amended in parallel claim 6. Appropriate correction is required.

Claims 1-5, 7-12, 14-15, 17-18 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,249,836 by Downs et al.

Regarding claim 1, a method of dynamically allocating network resources including a plurality of computers (Downs: col. 5, lines 24-26; lines 42-58), comprising:

receiving a job request for networked resources (Downs: col. 2, lines 19-20; Fig. 6, tags 140 and 146; task request);

determining whether a sub-broker can handle the job request and, if no sub-broker can handle the job request, then reject the request (Downs: col. 5, lines 34-37; Fig. 6, tag 150) and if a sub-broker can handle the request (Downs: col. 5, lines 34-37), then prepare a computer having available resources to handle the job request (Downs: col. 5, lines 37-49); and

dynamically allocating networked resources among peers (Downs: col. 5, lines 24-26; lines 42-58).

Regarding claim 2, the method of claim 1, comprising qualifying each of the plurality of computers as either available, not available, or incompetent to handle the job request (Downs: col. 6, lines 25-34; lines 50-61).

Regarding claim 3, the method of claim 1, comprising maintaining an availability list for each of the plurality of computers (Downs: col. 5, lines 17-27; Fig. 2, tag 32).

Regarding claim 4, the method of claim 1, comprising testing an available computer to handle a job request including regression testing, functional testing, compatibility and standards testing and performance testing (Downs: col. 5, lines 49-62; col. 6, lines 9-12, 62-65).

Regarding claim 5, the method of claim 1, further comprising characterizing the received job request and forwarding the job request to one of a chosen plurality of sub-broker to reconfigure a computer to handle the job request (Downs: col. 3, lines 10-28; col. 5, lines 14-17; lines 50-62).

Regarding claim 7, the method of claim 1, comprising maintaining a list of sub-brokers (Downs: col. 5, lines 17-27; Fig. 2, tag 32).

Regarding claim 8, the method of claim 3, comprising maintaining a free peer pool list, an in-progress peer pool list and a waiting peer pool list (Downs: col. 5, lines 17-26; lines 55-62; col. 6, lines 41-49).

Regarding claim 9, the method of claim 8, comprising returning a computer to the free peer pool list after the job request has been completed (Downs: col. 6, lines 25-61).

Regarding claim 10, the method of claim 8, comprising removing a computer from the free peer pool list and adding the computer to the in-progress peer pool list during execution of the job request (Downs: col. 5, lines 57-62; col. 6, lines 41-61).

Regarding claim 12, the method of claim 8, comprising returning a computer to the waiting peer pool list and qualifying the computer to be placed on the free peer pool list (Downs: col. 5, lines 63- col. 6, line 8).

Regarding claim 11, the method of claim 1, wherein a computer is prepared by a global peer processing unit (Downs: col. 4, lines 59-67).

Regarding claim 14, the method of claim 1, comprising registering sub-brokers with a master broker (Downs: col. 2, lines 20-25; col. 6, lines 34-40).

Regarding claim 17, the system of claim 1, wherein said job request is received by a master broker (Downs: col. 2, line 20; server; resource allocator; col. 3, lines 23-28).

Regarding claim 18, the system of claim 1, wherein each of said sub-brokers is associated with one of the computers among said plurality of computers (Downs: col. 2, lines 15-20; col. 3, lines 25-28).

Regarding claim 15, a system for dynamically allocating network resources (Downs: col. 5, lines 24-26; lines 42-58), including a plurality of computers, comprising:

a master broker residing on one of said plurality of computers (Downs: col. 2, line 20; server; resource allocator; col. 3, lines 23-28);

at least one sub-broker residing on another one of said computers (Downs: col. 2, lines 21; resource providers);

at least one peer from said plurality of computers (Downs: col. 2, lines 21; resource providers; Figure 1, tag 16);

said master broker capable of receiving a job request and determining whether the at least one sub-broker can handle the job request (Downs: col. 3, lines 56- col. 4, line 3);

if said at least one sub-broker can handle the job request then prepare the computer to perform the job request (Downs: col. 4, lines 46-58; col. 6, lines 41- col. 7, line 5).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,249,836 by Downs et al ("Downs") in view of U.S. Publication No. 2002/0083183 by Pujare et al.

The Downs reference teaches a system of dynamically allocating network resources in claim 5.

The Downs reference does not explicitly state a patch queue, pre-release, command or a libc sub-broker.

The Pujare reference teaches nodes that include a patch queue sub-broker (Pujare: page 2, para 19), pre-release sub-broker (Pujare: page 2, para 19), command broker (Pujare: page 3, para 73-74), and libc sub-broker (Pujare: page 4, para 82)

The Pujare reference further teaches the invention is highly scalable, load balancing system for delivery of requested applications from servers (Pujare: page 3, para 72-74).

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to create the system of dynamically allocating network resources as taught by Downs while employing patch, pre-release, command, and libc brokers as taught by Pujare in order to provide requested applications to clients streamed over the network in a highly scalable, load balancing environment (Pujare: page 3, para 72-74).

Claim 16 is rejected under the same rationale given above. In the rejections set fourth, the examiner will address the additional limitations and point to the relevant teachings of Pujare and Downs.

Regarding claim 16, the system of claim 15, wherein the at least one sub-broker includes a patch queue sub-broker, a pre-release sub-broker, a command sub-broker and a libc sub-broker.

Claims 13, 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No 6,249,836 by Downs in view of U.S. Patent No. 6,070,191 by Narendran et al.

Regarding claim 21

The Downs reference teaches dynamically allocating resources in the system of claim 1.

The Downs reference does not explicitly state load balancing.

The Narendran references teaches dynamic allocation of resources includes load balancing (Narendran: col. 4, lines 29-35).

The Narendran reference further teaches load balancing also provides fault tolerance (Narendran: col. 3, lines 19-24).

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to create the system of dynamically allocating resources as taught by Downs while employing load balancing as taught by Narendran in order to provide fault tolerance (Narendran: col. 3, lines 19-24).

Claims 13, 22-23 are rejected under the same rationale given above. In the rejections set fourth, the examiner will address the additional limitations and point to the relevant teachings of Downs and Narendran.

Regarding claim 22, the system of claim 21, wherein load balancing includes forming peer pairs (Narendran: col. 7, lines 61- col. 9, line 6).

Regarding claim 23, the system of claim 1; wherein each of the sub-brokers is in communication with the other sub-brokers (Narendran: col. 7, lines 40-50).

Regarding claim 13, the method of claim 1, comprising determining whether the job request can be handled by one computer, and if necessary, assigning two or more computers to handle the job request, wherein the computers are peers (Downs: col. 1, lines 15-22; Narendran: col. 7, lines 40- col. 8, line 6).

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No 6,249,836 by Downs in view of U.S. Patent No. 6,725,253 by Okano et al.

Regarding claim 19,

The Downs reference teaches the system of claim 17.

The Downs reference does not explicitly state any peer can be the master server.

The Okano reference teaches any peers can become the master broker (Okano: col. 10, lines 52-63).

The Okano reference further teaches the invention keeps functioning in the event of a failure or disaster (Okano: col. 6, lines 54-61).

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to create the system of allocating network resources as taught by Downs while employing a peer as the new master as taught by Okano in order to maintain providing services in the event of a failure or disaster (Okano: col. 6, lines 54-62).

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No 6,249,836 by Downs in view of U.S. Patent No. 6,070,191 by Narendran et al in further view of U.S. Patent No. 6,725,253 by Okano et al.

Regarding claim 24,

The Downs and Narendran references teaches the system of claim 23.

The Downs and Narendran references do not explicitly state two peers share the same job request at the same time.

The Okano reference teaches two peers share the job request (Okano: col. 6, lines 48-53).

The Okano reference further teaches the invention keeps functioning in the event of a failure or disaster (Okano: col. 6, lines 54-61).

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to create the system of allocating network resources as taught by Downs and Narendran while employing a two peers sharing the same request as taught by Okano in order to maintain providing services in the event of a failure or disaster (Okano: col. 6, lines 54-62).

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,249,836 by Downs et al ("Downs") in view of U.S. Patent No. 5,862,138 by Liu.

Regarding claim 20,

The Downs reference teaches the system of claim 17.

The Downs reference does not explicitly state use of a queue.

The Liu reference teaches a broker has a queue processing unit including an incoming request queue (Liu: col. 8, lines 34-42), an in-progress request queue (Liu: col. 8, lines 50-54) and a completed request queue (Liu: col. 12, line 60-67).

The Liu reference further teaches the invention allows efficient routing of data packets throughout the network utilizing the queues to adapt to network load and failures (Liu: col. 4, lines 57- 65).

Therefore it would have been obvious at the time of the invention to one of ordinary skill in the art to create the system of dynamically allocating resources as taught by Downs while employing queues as taught by Liu in order to efficiently route messages according to network conditions (Liu: col. 4, lines 57-65).

REMARKS

Applicant has amended claims 1, 6, and 13 and added claims 16-24.

The Applicant Argues:

With respect to claims 1, Downs does not teach dynamic allocation of resources between resource providers because each provider is selling resources.

In response, the examiner respectfully submits:

The Downs reference teaches the claimed limitation. Downs teaches receiving a server with a resource allocator that receives intent to sell resources with descriptions of processing power from resource provider. Downs also teaches receiving task requests from clients with processing needs. The server matches the request for service to one of the resource provider capable of handling the job (Downs: col. 2, lines 13-22). The number of resource providers, who provide the means to process the tasks, is dynamically changing (Downs: col. 3, lines 29-31; col. 5, lines 24-26; lines 42-62). Therefore a resource may be available one moment and unavailable the next. Therefor the server must assign the task, dynamically allocating the task to the resources available. The argument that because the resource providers are selling their resources is moot since they are dynamically sent tasks based on their availability and processing power (Downs: col. 5, lines 38-62).

PRIOR ART

U.S. Patent No. 6,463,454 by Lumelsky et al teaches capacity based dynamically replicating content among servers for delivery.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin R. Bruckart whose telephone number is (571) 272-3982. The examiner can normally be reached on 8:00-5:30PM with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Benjamin R Bruckart
Examiner
Art Unit 2155

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